

## XLII.—List of the Species of Feline Animals (Felidæ).

By Dr. J. E. GRAY, F.R.S. &amp;c.

It will perhaps facilitate the study of the species of Feline animals to give a list of the sixty species which are contained in the British Museum, and of the two or three well-established species that are not in the Collection, but which we hope soon to acquire.

The species of Cats in the accompanying list are in every case made out by the comparison of a series of specimens of each species, which has been carefully made; and they are arranged in the Museum side by side, so that any person can verify for himself the authority for the species, which is a very different thing from the comparison of figures or descriptions.

I do not undertake to demonstrate that every kind of cat in the list is a distinct species; but I consider that they are so as far as the specimens in our collection allow us to judge. If, however, other specimens should show that what I have regarded as species are only varieties, the variations will exist between two specimens put in the same division and probably placed next to each other. Thus I will not undertake to say that all the species of Ocelots are distinct and permanent species; but they are all arranged together, and it is the same with some other groups.

Since my revision of the Cats was published, Messrs. Blyth, Jerdon, Elliot, and others of the same school of naturalists have proposed to regard several of the specimens on which I had established species as only variations of other species. I have carefully reexamined all these specimens, and compared the animals and their skulls. The naturalists above referred to seem to have overlooked the characters afforded by the latter, and I have not generally found their observations well founded.

The synonymy of the Cats is exceedingly confused; indeed it would look as if several authors had made their synonyma entirely from memory, without the comparison of specimens. The figures in Geoffroy St.-Hilaire and Cuvier's 'Histoire Naturelle des Mammifères' are generally very good, except in the tail being frequently made too long for the animal—as I have observed on a former occasion, longer than it is said to be in the descriptions that accompany the plates, as *Felis chaus* for example, where the length of the tail makes the figure more resemble the steppe-cat of Bokhara (*Chaus caudatus*) than the common jungle-cat of India, which it is named on the plate.

As an instance of inaccuracy in quotation one may cite the

“Chat de Nepaul” (*Felis torquata*) of F. Cuvier—which is said by Blyth and Jerdon to be the same as my *Felis ornata* figured in the ‘Indian Zoology,’ the spotted wild cat of Jerdon. Two species cannot be more unlike, the one being a cat with round spots, and the other a cat with cross bands, evidently the same as *Felis nipalensis* of Vigors and Horsfield, believed to be a hybrid between the domestic cat and some Indian wild cat. Indeed the way in which some Indian zoologists quote the figures of Geoffroy St.-Hilaire and Cuvier’s ‘Hist. Nat. des Mammifères’ makes me very doubtful if they have the book to consult.

Most of the species cited are described in the ‘Catalogue of Carnivorous Mammalia in the British Museum,’ in which the skulls of many species are figured. The habitats are those attached to the specimens in the British Museum, and they give the distribution of the species from the actual comparison of specimens; sometimes, however, as in the case of Malacca, the habitat given may be only the port from which the specimen was shipped.

I. CATS. Ears rounded, not ending in a pencil of hairs; legs moderate; tail more or less elongate.

A. Cheeks without any streak radiating from the back edge of the eye.

1. LEO.

1. *Leo nobilis*. Africa; Persia; Guzerat. B.M.

2. UNCIA.

2. *Uncia irbis*. Thibet. B.M.

3. LEOPARDUS.

3. *Leopardus pardus*. India, Nepal; Senegal. B.M.

4. *L. japonensis*. Japan.

5. *L. chinensis* (*Felis Fontanierii*, M.-Edw.?). China. B.M.

6. *L. onca*, var. (*L. Hernandezii*, Gray, P. Z. S. 1857, p. 278, t. lviii., 1867, p. 402). South America. B.M.

4. SERVAL.

7. *Serval capensis*. North, West, and South Africa. B.M.

8. *S. rutila* (*Felis aurata*, Elliot). Senegal, Sierra Leone. B.M.

9. *S. neglecta*. Gambia. B.M.

10. *S. servalina*. Sierra Leone, Senegal. B.M.

Mr. Elliot regards *Felis rutila*, *F. neglecta*, and *F. celido-*

*gaster* all as the same species; but I do not think that the typical specimens in the Museum on which the species were founded sanction this theory.

5. PUMA, Baird, Mamm. N. Amer. t. lxxi. & lxxiv.

11. *Puma concolor*. North America. B.M.  
 12. *P. jaguarondi*. Brazil, Buenos Ayres, Columbia, and Guatemala. B.M.  
 13. *P. eyra*. Bolivia. B.M.  
 14. *P. badia*, Gray, P. Z. S. 1874, t. Borneo. B.M.

B. *Cheeks with one narrow streak from the hinder angle of the eye.*

6. PAJEROS, Wiegmann, Archiv, 1873, t. iii. (skull).

15. *Pajeros pampanus* (*Felis passerum*, Sclater). Chili and Santa Cruz. B.M.

C. *Cheeks with two dark streaks radiating from the back of the eye.*

a. *Orbits complete; head elongate.*

7. VIVERRICEPS, Ann. & Mag. Nat. Hist. 1874, xiv. p. 93.  
 16. *Viverriceps Bennettii* (*Felis himalayana*, Jardine, not Gray). Nepal, Madras, Shanghai, Malacca. B.M.  
 17. *V. Elliotti*. Nepal. B.M.  
 18. *V. rubiginosa*. Ceylon, Nellore, Malacca. B.M.

8. ÆLURINA, Gervais; Gray, Ann. & Mag. Nat. Hist. 1874, xiv. p. 93.

19. *Ælurina planiceps*. Sumatra, Borneo, Malacca. B.M.

b. *Orbits incomplete; skull oblong, nose rather produced.*

9. TIGRIS.

20. *Tigris regalis*. India, China, Mantchuria, Borneo. B.M.

10. NEOFELIS.

21. *Neofelis macroscelis*. India, Assam, Sumatra. B.M.  
 22. *N. brachyura*, P. Z. S. 1862, t. xliii. Formosa. B.M.

11. CATOLYNX, Blainv. Ostéogr. t. ix. (skull).

23. *Catolynx marmoratus*. Borneo, Malacca. B.M.  
 24. *C. Charltoni*. Nepal. B.M.

## 12. PYROFELIS.

25. *Pyrofelis Temminckii* (*Felis aurata*, P. Z. S. 1867, t. xxxvi.).  
Sumatra, Nepal. B.M.

## 13. PARDALINA.

26. *Pardalina Warwickii* (*Felis guigna*, Molina, Wiegmann Archiv, 1873, t. ii.; *Felis Geoffroyi*, D'Orbigny, t. xxiii. & xxiv.). Paraguay, Chili. B.M.

## 14. FELIS.

## a. Moderate-sized spotted South-American Cats.

\* Head large; spots in lines, seldom confluent.

27. *Felis pardalis*. South America, Guatemala. B.M.  
28. *F. grisea*. Guatemala. B.M.  
29. *F. melanura*. South America. B.M.  
30. *F. picta*. South America. B.M.  
31. *F. pardoides*. Tropical America. B.M.

\*\* Head large; spots scattered.

32. *F. tigrina*. Tropical America. B.M.

\*\*\* Head small; spots in roses, scattered.

33. *F. pardinoides* (*F. punctulata*, Henkel; *F. Geoffroyi*, var., Elliot). Bogota. B.M.

\*\*\*\* Head small; spots in lines, rarely confluent; tail elongate.

34. *F. macroura*. Brazil, Paraguay, Veragua. B.M.

## b. Small South-American Cats with cross bands and annulated tails.

35. *F. colocolo*, Wiegmann Archiv, 1870, t. i. & iii. Santiago.

## c. Small-sized spotted Asiatic Cats.

\* Tail short.

36. *F. chinensis*, Ann. & Mag. Nat. Hist. 1874, xiii. p. 53.  
China. B.M.  
37. *F. euphilura*, P. Z. S. 1871, t. lxxvi. Siberia?, Shanghai.  
B.M.  
38. *F. javensis*. Java. B.M.  
39. *F. Jerdoni* (*F. rubiginosa*, var., Elliot). Sumatra. B.M.

40. *F. minuta*. Sumatra. B.M.  
 41. *F. Herschelii*. India? B.M.

## \*\* Tail elongate.

42. *F. wagati*. Moulmain. B.M.  
 43. *F. pardochroa*. Nepal, Borneo? B.M.  
 44. *F. tenasserimensis*. Tenasserim. B.M.  
 45. *F. nipalensis*. Nepal. B.M.

## d. Small-sized clouded Asiatic Cats.

46. *F. domestica*, var. *tricolor* (*F. colocolo*, F. Cuvier & H. Smith, not Molina). Domestic. B.M.  
 47. *F. inconspicua*. Nepal. B.M.

## e. Small cross-striped Asiatic Cats.

48. *F. manul*. Nepal, Kirgesen. B.M.

## f. Small clouded and marbled African Cats.

49. *F. caligata*. Africa, North, South, and East, Madagascar; Jericho. B.M.

## g. Small clouded European Cats.

50. *F. catus*. Germany, Scotland. B.M.

## II. LYNXES. Ears ending in a pencil of hairs; legs elongate; tail generally short.

## 15. CHAUS.

51. *Chaus ornatus* (*Felis torquata*, Jerdon, not F. Cuvier). India. B.M.  
 52. *C. Jacquemontii* (*Felis chaus*, Jerdon). India, Nepal. B.M.  
 53. *C. caudatus*, P. Z. S. 1874, t. vi. & vii. Turkestan. B.M.  
 54. *C. catolynx*. Nepal. B.M.

## 16. LYNCUS.

## \* Soles of feet overgrown with hair; animal large.

55. *Lyncus borealis*. Sweden. B.M.  
 56. *L. lupulinus*. Sweden. B.M.  
 57. *L. canadensis*. Canada, Fort Colville, Kamtschatka. B.M.

## \*\* Cervaria. Soles of feet nakedish; animal smaller.

58. *L. pardinus*. Spain, Sardinia. B.M.  
 59. *L. isabellinus*. Thibet. B.M.

60. *L. rufus*. Charlton, U. S., California, Canada. B.M.  
 61. *L. maculatus*. Mexico, New Orleans. B.M.

## 17. CARACAL.

62. *Caracal melanotis*. South, Western, and Eastern Africa. B.M.

XLIII.—*A List of Butterflies, with Descriptions of new Species, from the Andaman Islands.* By W. C. HEWITSON, F.L.S.

THE kindness of Mr. Higgins has enabled me to give the following list of butterflies, and to add the new species to my collection. They were sent to him by Captain Wimberley, and are in excellent condition.

*Papilio Charicles*, n. sp.

— Mayo. A very distinct and beautiful species, figured and described by Mr. W. S. Atkinson in the 'Proc. Zool. Soc.' for 1873.

— *Eurypilus*.

— *Agamemnon*.

— *Pammon*.

— *Antiphates*.

— *Coon*, var. *Doubledayi*.

*Pieris Nadina*.

*Hebomoia Glaucippe*.

*Eronia Valeria*.

*Callidryas Chryseis*.

— *Crocale*.

— *Pomona*.

*Terias Hecabe*.

— *Harina*.

*Thestias Pyrene*.

*Euplœa andamanensis*. Figured by Mr. Atkinson on the same plate as *P. Mayo*.

*Danaïs Aglea*.

*Hestia Agamarschana*. All the examples in this collection are much darker than Felder's figure.

*Cynthia Deione*.

*Messaras Erymanthis*.

*Atella Alcippe*.

*Cirrhochroa Tyche*.

*Cethosia Biblis*. There is a very interesting female variety of this

species, with a large white spot on the anterior wing; the posterior cream-colour.

*Vanessa cardui*.

*Junonia Enone*.

*Cyrestis Cocles*. For delicacy of colour these are some of the most beautiful things I have ever seen.

*Neptis aceris*.

— *Pampanga*.

— *Cnocalis*, n. sp.

*Diadema Bolina*.

*Adolias Teuta*.

— *Acontius*, n. sp.

— *Cibaritis*, n. sp.

*Minetra Sylvia*.

*Kallima Philarchus*.

*Doleschallia Bisaltide*.

*Amathusia Phidippus*.

*Discophora Ogina*.

*Cylo Leda*.

*Melanitis Cottonis*, n. sp.

*Eurytela Horsfieldii*.

*Mycalesis Samba*.

*Amblypodia Amytis*.

*Aphnaeus Lohita*.

*Loxura Atymnus*.

*Anops Thetis*.

*Lycæna Elpis*.

*Ismene Chromus*.

*Papilio Charicles*.

Upperside. Female dark brown. Anterior wing semi-